3:Huntingford E-5 (1921-1928)1929 FL6 Dorobo FL6

together. The rim is made of a single stick bent in an oval and the ends bound together; across it are fastened pieces of tree-rope.[1] Grindstones (*litito*, N.) have already been mentioned.

The Dorôbo have no knowledge of metallurgy, and they have no musical instruments, pottery, or, apparently, objects of ivory. Metal-work and pottery they buy from the Nandi.[2]

Trade and Commerce.

Trade is by barter. The Dorôbo give the Nandi baskets, dressed skins, and bows in exchange for ironwork, tobacco, pottery, beads, and other necessaries which they cannot produce themselves. There are no special market-places, but goods are taken to any place where there are Nandi, and there exchanged.

Land.

(i) *Tenure.*—The forest is divided by the elders into sections, and each family has its own section of forest. The boundaries between family holdings may be paths or rivers.

(ii) *Geographical Divisions.*—The Dorôbo divide their country into divisions called *koret*, pl. *koroseek* (N.). The chief divisions appear to be called Kipkorom, Sirua, Kimurienge, Sosoiyo (bamboo, N. *tekat*), and Mokopich. The majority of the present place-names are Nandi.

The points of the compass are called as follows:—North and South: Murot (N.). East: Ye-torur (N. *ulin-durur* = up). West: Ye-'rek-to (= where(-the-sun)-descends-thither).

III.—Government.

The Kâmelilo-Kâpchepkendi Dorôbo have now no chief. The last to hold office was Parîngetuny[3] arap Ñgamîngam, who was chief at the time of the Nandi Punitive Expedition, 1905. He is still alive, though he no longer holds office. The chief was elected, and the office was not hereditary. The chief (*kiruogindet* (N.)=councillor) was chosen for "ñgelyepta kitio" ("tongue only" = sense, ability and position). The only form of Government that exists now is a council of elders (*kiruoget ap poiisiek*, N.), who meet and decide on matters which are brought to them. They seem to have little power of enforcing obedience to their decisions, though they claim

[1] This is described and illustrated, although it is a Nandi use, since H.N. does not mention it.

[2] On the use of horns, *see* V, "Miscellaneous." These can hardly be considered as instruments of music.

[3] N. = lion-killer.

6:Huntingford E-5 (1938-1939) 1953 FL6 Dorobo FL6

described as *cemenemsnawet*, i. e. narrow-waisted; she is bigger than the others, with a large head and body and no sting. The workers, called simply *sekemik*, "bees", are considered to be males [8], and the Dorobo say that all the male bees in a swarm fertilize the queen. The queen lives inside the swarm surrounded by the bees, and never goes outside it, being fed by the workers with the honey they make, and she lays her eggs in the fresh combs before any honey has been deposited in them. The workers make honey, according to the Dorobo, by eating the 'water' (*pek*) of the flowers, which they vomit into the empty combs when they return to the swarm [9]. A comb is made (or built, *tec mpokiet* = build the comb) by the mouths of the bees with the help of another substance which they get also from flowers; and from the same source they get wax (*temeniet*) which they bring in on their feet, and use to close up openings in the hive [10]. This is what the Dorobo say. The drone, on the other hand is considered to be a female which does no work and has no sting. The drones just fly about "playing", and as far as the Dorobo can see perform no useful work. They just eat up the honey and after a time the workers kill them, *kotil kütit*, "they cut their necks", so that they shall not eat the whole supply of honey [11]. Terms used to describe bees are:

Kamet = queen (lit. mother).
Sekemik = workers (sing. *sekemiat*).
Kapurenik = drones (sing. *kapuriot*).
Uarek = young bees, grubs (sing. *uaruet*).
Olaloiyet = swarm.
Mpokiet, *Wanasiet* = Empty comb, either new and unused, or old.
Kipiriritiet = comb full of honey.

The Dorobo seem to have no idea of the length of a bee's life, which in Europe may amount to some seven months in the case of bees born in the autumn.

Honey-barrels or hives, *pasanet*, are made of slats or of hollowed-out logs and placed in trees for the bees to swarm in. Once a swarm has entered it is considered to belong to the owner to the barrel. If it stays for a long time (the Dorobo say) it may be inherited by the owner's son; but if it should go from one man's barrel into another's, nothing is done, for though the Dorobo say that their bees get to know them, they do not claim to be able to control their movements. And if a swarm deserts a barrel, the owner just waits till another swarm comes to it. The commoner type of honey-barrel is

[8] The workers are really females whose ovaries have become modified so that they do not normally produce eggs.

[9] This is not very far short of the truth, for bees take into their crops a substance called nectar from the flowers and deposit it in the comb. By the action of their saliva, which produces a chemical change, the nectar becomes honey, and is regurgitated into the cells for storage or for feeding the grubs. (Cf. article Bee in the Encyclopaedia Britannica, ed. 11, by Prof. G. H. CARPENTER.)

[10] Wax is really secreted by special cells in the abdomen of the worker bees.

[11] Drones are in reality the males which mate with the queen. When the mating season is over and food is getting scarce, they are killed and thrown out by the workers.

6:Huntingford E-5 (1938-1939) 1953 FL6 Dorobo FL6

that made of hollowed-out logs. A suitable log is cut of such a length as to allow for a length of about 3 ft. 6 ins. in the finished article. Trees specially favoured for making honey-barrels are the *mocet* and *rerendet*, on account of the ease with which they can be worked; others used are the *tenetuet*, *silipcet*, *lepekuet*, *kipsepuet*, and *marorto*. The entire work of shaping and cutting is done with the axe. The log is first split into two equal halves longitudinally, which are then hollowed out, leaving sides about an inch thick. In the bottom of one half an oblong hole is cut, through which the bees can enter and the owner put his hand to take honey. Four holes are bored in the sides of each half with a red-hot boring-needle (Fig. 1), and when the two halves are put together, liana is threaded through the holes to hold them in place.

The slat barrel, not so common as the dug-out because of the difficulty of making the end-pieces, is made of strips or slats of strong bark, the *mocet* and *rerendet* trees being favourites for this purpose. The ends are formed of two solid circles of wood which have to be cut laboriously from a log and trimmed to shape. The bark slats are then put in position round the endpieces and bound together with liana, a tricky piece of work, as anyone who has had to do a similar job will realize; and to get the barrel into place in the tree also requires great care, since it easily collapses if roughly handled. A hand-hole is made in the under side, as in the dug-out type (Fig. 1, 2).

a) and c) Needles; d) for boring, e) for basket work.

Fig. 1. Dug-out Honey-barrel.

When a man puts up a new honey-barrel, he calls out to the bees to come and settle in it [13]. The invocation to bees has a set form, and is uttered in a rather unnatural, high-pitched tone:

Sekem, sekem, ce mii en emotinueen tukul, wa pusi [13] *anyun, ocololion,*
bees, bees, who are in countries-these all, come here now, pour-in-(honey),
ocololion [14].
pour-in-(honey).

Bees do not get ill, they say, but are liable to be killed by heavy rain if they are caught in a storm while getting honey. They have also a number

[13] New swarms take off from a bee colony when it becomes congested. Young queens are allowed to develop, and the old queen leads off a swarm to find a new home.

[13] This obscure expression is said to be equivalent to *Onyon yu*, "come here".

[14] The Nandi have borrowed this formula, and altered it to *Opua ocololion temenai* [illegible] *se lalan*, "come ye, pour wax into the warm hut".

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224 [816] [220] The year was divided, from the hunting point of view, into the dry season and the wet season. In the wet season people did not generally go out hunting, but stayed at home and set traps to catch antelopes and the like. In the dry season they hunted all sorts of game with bow and arrow in the forest and far afield. Thus, Arap Minio told of how soon after he had been circumcised he was one of a hunting party that went into North Nandi, as far as the hills Kaptepe and Tapsakoi [15] near the modern Turbo, some forty miles from the forest, in the days when there were no Europeans there; and another Dorobo spoke of hunting monkeys as far from home as Kapiyet in North Nandi. Leopard, monkey, and pig are still plentiful. Buffalo still exist to the east, in the direction of Timboroa and Londiani, but they have not been hunted by the Dorobo in recent years, in fact, they say, not since about 1900 when the Kaplelac age were warriors. Elephant are no more, but they were found in this area, according to some old men, when the Sawe and Kipkoimet were warriors about 60 to 70 years ago. There are no lion in the forest, but the Dorobo occasionally shot them in the plains. Leopard used to be hunted by organized parties, but this practice has been discontinued for some years, though they are still attacked and killed by individuals if they get aggressive, as in February 1939, when Arap Singira got his lip torn in a leopard hunt at Sosoiyo. Sometimes traps are made for them, of wire which is picked up on the farms. But trapping leopard is not common, and the trap made by Arap Menati which caught a leopard in July 1938 was said to be exceptional. [231] Generally they prefer to hunt a leopard with dogs, as in the old days, when if one was put up by a dog and climbed a tree, the hunter came and shot it.

[185] There is really no close season, as we understand the expression. The trapping season, which did in fact give the game a respite, was not intended for that purpose, but was for the convenience of the hunters themselves, because when it is wet, the forest is difficult to go through, the undergrowth thick, and the ground muddy and slippery; though some have been known to hunt pig there in wet weather.

[411] Dorobo hunting equipment consisted of a bow, poisoned arrows, quiver, knife, and dogs. Spears have never been used by the Kipkurerek, and the spear trap reported to be found among some Dorobo does not appear ever to have been one of their methods of killing big game. For trapping, a man needs only something to cut the materials with, and, of course, his skill; if he is to make a pit-trap, he needs something to dig with.

411 [322] [239] Bows are made mainly from the *kuriot* tree (teclea sp.) and are about 5 ft. in length. A suitable piece of wood is cut and scraped with a knife-blade till it is smooth and of the right thickness. The bow-string, *inet*, is made of gut from the giant pig, *tumta;* the gut is stretched, greased and twisted till it becomes sufficiently strong and pliable for use. It is knotted to the ends of the bow an inch or so from each end: no notch is cut in the wood to receive it. Arrow-shafts are made from the *koromandet* and *masaita* trees, as well as from split bamboo; they are smoothed with a knife-blade in the same way as

[103]

[15] Better known to Europeans as Kibolosa and Kapsagol.

294 412 283 /233 cont./ As there,[1] the tanned hides are sewed into articles of clothing with an awl (maramaog) and a thread twisted out of animal tendons (asug). If a number of hides for which, at the moment, one has no need for one 's own 439 use has piled up, a few old men with women and children, laden 437 with skins and also steppe salt, set out for a neighboring area. Where the distance between this and the Wandorobo camp is such that it permits frequent trade, these caravans appear at the regularly held markets. If, however, they are able to come only rarely, they [805] peddle their wares, inasmuch as, out of ignorance of time reckoning, they do not wait for the market days. They readily find customers, since both articles are very much in demand. The agriculturalist principally dependent on a vegetable diet always needs salt, but he can only rarely extract it himself, since as a rule the arable soil contains no salt or such not in sufficient quantities. The need for hides /234/ is also often greater than the local production, even today when fabrics have largely replaced the leather clothing. After protracted haggling, an agreement is finally reached, and the Wandorobo, satisfied, set out for home with the bartered vegetables. If the hunting was sometimes particularly lucrative or if an elephant or rhinoceros was killed, part of the meat would also be sold to the always meat-hungry agriculturalists. Many of the latter, for example, the Wataita and Wakamba, also buy the meat of predatory animals from the Wandorobo, others disdain it altogether, and therefore, in trading, they test each piece for smell and taste.

231 [889] Old men, who only now and then in the evening lie in wait for game at a watering place, devote themselves outside the camp especially to the checking and supervision of the beehives (Fig. 82), a large number of which hang within an hour's range. These are wooden tubes 120 centimeters long and /Fig. 82 appears here/ 30 centimeters thick, with an interior breadth of about 25 centimeters. 231 322 412 They are made by hollowing out a correspondingly long piece of tree trunk, a very arduous task because the tools are so primitive. After the trunk, through hewing with an ax, appears circular in cross-section and tapered at both ends, it is smoothed on the outside with a knife (pandyug). Two instruments are used for the hollowing out

1, [i.e., among the Masai--Analyst]

/234 cont./

231 322 [412] the first consists of the ax blade stuck into a wooden handle like a knife and is used as a paring chisel; the other is a hollow chisel (nja) with which one smooths the tubes on the inside. The two openings are closed corklike by flat wooden covers fitting into the opening, into each of which two holes permit entry for the wild bees. For hanging, one puts around the middle part two loops twisted out of lianas, which are connected, handlelike, by a plaiting of lianas, like the straps of a holdall. The beehive is picked up by this handle with a hooked branch, at the upper end of which is lashed a second one with a hook on top. With the latter the whole thing is hung in the branches of taller trees. On the side hanging downward the beehive bears an ownership mark. As a rule it is the same as the one that is burned on the long tang or on the extension tang of the arrow point. On the beehive one finds it either whole or only its lower part. Before the honey is removed /235/ the bees are driven out by a very smoky fire kindled under the tree (1).

231 [283]

[422]

Fig. 82. (1/10)

[171] 1. I never observed among the El dorobo a stupefying of the bees by means of Bovista (Lycoperdon), such as I saw on Kilimandscharo among the Wadschagga.

/235 cont./

231 Then a man climbs up to the beehive, fastens it to a rope, unhooks it, and very slowly lowers it to the ground, so that through the continuing effect of the smoke the bees will also be driven out of the combs or stupefied in them. It is obvious that through this the honey must become very dirty, and, in fact, it tastes strongly of smoke and contains a large number of dead bees and larvae. No other method of driving the bees out is possible, however, and since they are extremely vicious and the people, only scantily clad, expose such large areas for their stings, the honey gatherers have to be enveloped in a thick cloud of smoke for their own protection. I was able to observe the viciousness of the native bees several times. It is by no means rare that a swarm will attack a caravan and sting some of the porters and donkeys into unconsciousness, the latter even to death. Tobacco smoke in particular incites them to attack, but they also seem to dislike loud singing and shouting.

In extracting the honey, one leaves about a quarter of it in each [251] comb so that the bees will not abandon the hive. The extracted honey [415] is packed into leather bags or wooden pots and thus stored. The capture of wild bees is unknown. Where such are found in a hollow [136] tree, one hangs in the vicinity an empty beehive that has previously been smeared on the inside with the extraordinarily aromatic honey of a Melipona species (subspecies Trigona) (2)

2. Identified by Herr Dr. Enderlein from samples sent to the Museum für Naturkunde /Museum of Natural Science/, Berlin.

222 known as el maîn. In order to be able to extract the honey of wild bees from hollow trees, one drives them out by holding aloft a burning branch with which one climbs to the hole.

411 In the camp one sees the men wither squatting about dully or
• 322 busy with carving, such as the beehives just mentioned, or with
[461] making bows, arrows, and clubs. The stick intended for the making
[462] of a bow (Fig. 83) (from the ol borogoi tree) is rounded, cut tapering at both ends, and then scraped smooth. After it has been rubbed

/235 cont./

411 322 283 237 with fat several times, it is bent over the fire. The string is plaited together, turning and braidlike, out of short animal tendons and is extended by further interweaving up to the required length. The projecting starting-ends of the individual pieces of tendon are neatly cut off, whereupon one then rubs the now finished bowstring with some fat.

237 824 412 The arrow shaft (Fig. 84) is carved out of a dry wooden stick, first rounded, then smoothed by scraping. The upper end is wound with tendons that have been coated with the varnishlike juice of a not yet described species of gladiolus known as diriṭṭ, whereupon, on top, one drills in the one- /236/ /Figs. 83 and 84 appear here/ 411 237 136 283 824 centimeter-long hole for the tang of the arrow by a twirling motion with a thin wooden chisel. At the lower end the three-part feathering -- out of the feathers of the carrion vulture (Neophron percnopterus) -- is first fastened on by being wrapped with a very fine bast thread and then glued fast with the gladiolus juice just mentioned. Another wrapping of animal tendons is found between the feathering and the rear notch for the bowstring, in order to prevent a splitting of the shaft.

325 322 171 439 The people buy the iron points; only if a point breaks off /237/ do they as a rule forge a new one for themselves. Clubs are carved from a piece of wood, as among the Masai. They buy the spears, of which there are one or more in almost every camp, from the blacksmiths of the Masai. The spears serve as weapons only in the camp, where shooting with arrows is not permitted, on account of the danger connected with that, since they are always poisoned.

415 439 285 The Asá for the most part buy wooden bowls and gourd bottles from sedentary tribes. On the other hand, in some places they plait shallow baskets, which they use for storing food.

524 829 171 The fact that the Wandorobo do not play the board game so popular among the Masai was explained to me by them with the words: "During the game we would forget to hunt and then, with our families, would have to starve."

512 517 With the coming of darkness complete stillness as a rule comes over the camps, quiet even during the day; the day's work is done and everyone goes to his hut. Only on moonlit evenings do the old 273 535 533 people often still sit in the open for a few hours, talking, with a gourd bottle of honey beer, while the young men and girls dance and let their falsetto song ring out through the still night, from

[TEXT CONTINUED ON PAGE 313]